UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1445 ROSS AVENUE, SUITE 1200
DALLAS, TEXAS 75202 – 2733

November 16, 2018

Ms. Felicity Dodson
Policy Analysis Branch
Regulatory Division, CESWG-RDP
U.S. Army Corps of Engineers
P.O. Box 1229
Galveston, Texas 77553-1229

Dear Ms. Dodson:

The U.S. Environmental Protection Agency (EPA) Region 6 has reviewed Public Notice (PN) SWG-2008-00497, dated October 4, 2018 and the associated compensatory mitigation plan dated, March 2018. The applicant, Port Arthur LNG Common Facilities Company, LLC (Port Arthur LNG), proposes to construct liquified natural gas (LNG) export facilities and associated pipelines. As proposed, the project would impact approximately 967.1 acres of wetlands and waters of the U.S. to construct the terminal site. Approximately 317.7 acres of wetlands and waters of the U.S. are proposed to be impacted to construct the Texas connector pipeline, and approximately 636.9 acres of wetlands and waters of the U.S. are proposed to be impacted to construct the Louisiana connector pipeline. The proposed project pipelines travers Jefferson and Orange Counties in Texas and Cameron Parish in Louisiana. The terminal is located adjacent to the Sabine-Neches Waterway (SNWW) in Port Arthur, Jefferson County, TX.

The following comments are being provided for use in reaching a decision relative to compliance with the EPA's *404(b)(1) Guidelines for the Specification of Disposal Sites for Dredged or Fill Material* (Guidelines) (40 CFR Part 230):

Upon review of the current proposal, the EPA has concerns whether the information provided by the applicant on the proposed project will sufficiently enable the U.S. Corps of Engineers Galveston District (Corps) to make a legally defensible permit decision in regard to compliance with the Guidelines. Under the Guidelines, no discharge of dredged or fill material may be permitted by the Corps if: (1) a practicable alternative exists that is less damaging to the aquatic environment so long as that alternative does not have other significant adverse environmental consequences, or (2) the nation's waters would be significantly degraded. Under the Guidelines, a project must incorporate all appropriate and practicable measures to first avoid impacts to wetlands, streams, and other aquatic resources and then minimize unavoidable impacts. After avoidance and minimization measures have been applied, the project must include appropriate and practicable compensatory mitigation for the remaining unavoidable impacts. The Guidelines also require evaluation of all direct, secondary and cumulative impacts reasonably associated with the proposed discharge including effects on wildlife habitat, aquatic ecosystem diversity, stability and productivity, recreation, aesthetics, and economic values.

As provided in the PN, information regarding alternatives analysis and avoidance and minimization measures is limited in comparison to the scope and aquatic impacts associated with the project. The PN notes the applicant has stated that they considered both onsite and offsite alternatives for the proposed project, in addition to alternative facility configurations. The applicant indicated that they selected the proposed site because the site contains previously disturbed wetlands, a low percentage of tidal wetlands (compared to other sites considered), existing dock structures that can be modified to meet project needs, as well as patches of upland habitat. Regarding compensatory mitigation, the PN notes the applicant proposes to mitigate for permanent and conversion impacts to wetlands and waters of the U.S. by beneficially using dredged material from the project to create marsh habitat in the J.D. Murphree Wildlife Management Area (JDMWMA). The applicant proposes to create approximately 1,268.8 acres of marsh habitat in Salt Bayou Unit 16, known as the Pintail Flats. The applicant made their determination of credits by running several functional assessment methods and averaging the resulting ratios to arrive at a combined ratio average of 1.62 for the proposed project. Other than the statements included above, the PN provides no additional documentation on how the project will comply with the Guidelines. No detailed information has been provided regarding alternatives considered, avoidance and minimization of impacts to aquatic habitats. The compensatory mitigation information provided with the PN includes 3 maps showing project and mitigation area location. If it has not yet done so, we recommend that the applicant provide information to assist the Corps in making its factual determinations and to help ensure the spirit of the Guidelines are met. Additionally, the EPA recommends the proposed compensatory mitigation plan be made available for public review.

The 2008 Final Mitigation Rule states in Section 230.93(c)(1)(i) that for individual permits, the permittee must prepare a draft mitigation plan and submit it to the district engineer for review. The final mitigation plan must include the items describe in paragraphs (c)(2) through (c)(14) of the same section, *at a level of detail commensurate with the scale and scope of the impacts* [emphasis added]. At the district engineer's discretion, some of the elements may be addressed as special conditions to the permit. These required elements include: objectives, site selection, site protection, baseline information, determination of credits, mitigation workplan, maintenance plan, performance standards, monitoring requirements, long-term management plant, adaptive management plan, financial assurances and other information as required by the district engineer. While it is not required to submit this complete plan at the time of the PN, providing additional details at the earliest stage possible allows the public and commenting agencies to have a more complete understanding of the net impacts of the proposal, taking into account mitigation.

As previously indicated, the PN notes the Port Arthur LNG terminal and pipelines will impact a total of approximately 1,921.7 acres of wetlands and waters of the U.S. while the proposed compensatory mitigation plan identified a total of 885.9 acres of wetlands affected by the project. Furthermore, the compensatory mitigation plan proposes to compensate for only the permanent impacts to 769.1 acres of wetlands associated with the project. As described, the EPA is concerned the proposed compensatory mitigation plan will not provide adequate in-kind replacement of the functions and habitats lost at the impact site. To date, it is unclear if the wetland delineation or functional quality have been verified by the Corps at the impact site or the proposed mitigation site. As defined in the current compensatory mitigation plan, the wetlands at the impacted site include palustrine emergent (45%), palustrine scrub-shrub (53%) and estuarine emergent wetlands (2%) while the proposed mitigation is to reestablish estuarine emergent wetlands only. It is unclear as to the appropriateness of the approach to utilize an average of multiple functional assessment methods to determine a compensatory mitigation ratio for non-tidal marsh. It is also unclear why temporal losses are not addressed given the potential time between direct impacts being realized by construction activities at the proposed project site and the

proposed mitigation area achieving success criteria. The EPA recommends that the applicant conduct in-kind mitigation to compensate for the proposed impacts, and if out-of-kind mitigation is authorized, a mitigation ratio multiplier should be applied. The EPA recommends the applicant utilize a single functional assessment methodology or at least limit the models considered to those that have been historically utilized in Texas and Louisiana. The applicant should detail how the temporary impacts are anticipated to be restored to pre-construction conditions, particularly in the case of impacts to scrub-shrub and forested wetlands. The EPA recommends the applicant identify the impact duration and efforts to restore pre-project functions after the project has been completed. Typically, the threshold for activities to be considered temporary is less than 12 months or a single growing season. It may also be appropriate to require additional mitigation for any wetland conversion that may occur. If it has not yet done so, we recommend the applicant submit supporting documentation to the Corps to assist with ensuring adequate in-kind mitigation requirements are fulfilled.

The EPA recommends that any proposed mitigation plan needs to ensure appropriate site protection, mitigation workplan, maintenance plan, long-term management plan, and financial assurances are included. The compensatory mitigation plan notes that since the mitigation site is on JDMWMA property managed by the Texas Parks and Wildlife Department (TPWD) and owned by the State of Texas, long-term protection of the site may be ensured. To verify the site is protected in perpetuity, the EPA recommends documentation be provided to reflect the development restrictions placed upon the proposed mitigation area. Specific to the mitigation work plan, limited details are provided regarding the marsh creation plans other than the material will be placed to an elevation conducive to the establishment of marsh as indicated by geotechnical analysis, and the final elevation targets will not exceed mean higher high-water elevations. It is also unclear if the mitigation plan considers estimates of wetland land loss rates for the impact site and the mitigation site as doing so may result in additional mitigation acreage being required. The EPA recommends additional technical details be provided in the mitigation work plan to include wetland elevation targets, settlement curves, containment dike gapping details and land loss estimates in order to assess whether the mitigation proposal is likely to be successful and adequate for lost aquatic resources as the impact site.

For the maintenance plan and the long-term management plan components, the mitigation plan indicates no on-going maintenance is planned, and TPWD will be responsible for the long-term management of the lands within the JDMWMA. As the mitigation plan states that the JDMWMA continues to lose marsh each year due to erosion and salt water intrusion, it can be anticipated that those losses will continue into the future and impact a portion of the proposed wetland mitigation area. It would be reasonable to include maintenance and long-term management activities in addition to the monitoring requirements have been identified for a period of 20 years. The mitigation plans should include both short-term and long-term financial assurances and should clarify the responsible party for future financial obligations that may be required for the mitigation area.

Finally, the EPA supports the beneficial use of dredged material assuming the material is suitable and free of toxic pollutants. As the dredged material originates from an industrial area, the EPA recommends contemporary contaminant testing of dredged material per the Inland Testing Manual prior to any disposal activities. The EPA also encourages Port Arthur LNG to continue to actively seek other beneficial use opportunities for habitat restoration and establishment when dredged material is suitable and free of toxic pollutants during both the construction and maintenance phases of the projects.

In summary, the EPA recommends the Corps work with the applicant to enhance the information provided to assist the Corps in determining compliance with the Guidelines. Additionally, the EPA

recommends the Corps work with the applicant to develop a revised comprehensive compensatory mitigation plan at a level of detail commensurate with the scale and scope of the impacts for all unavoidable impacts. Thank you for the opportunity to review and comment on this PN, and if you have any questions on these comments, please contact Paul Kaspar of my staff, at kaspar.paul@epa.gov or 214-665-7459.

Sincerely,

Maria L. Martinez
Wetlands Section Chief

cc: U.S. Fish and Wildlife Service, Clear Lake, TX
National Marine Fisheries Service, Galveston, TX
Texas Commission on Environmental Quality, Austin, TX
Texas Parks and Wildlife Department, Dickinson, TX